# **Limited Phase II Subsurface Investigation Of**

## 80 Richards Street Brooklyn, NY 11231

### Aaron & Wright Project No. M030354DD.ERK

Prepared for: Mr. Isaac Ades

IDEA Nueva, Inc.

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New York, NY 10001

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December 15, 2003

Locations Nationwide



December 15, 2003

Mr. Isaac Ades IDEA Nueva, Inc. 302 Fifth Avenue New York, NY 10001

RE: Limited Site Assessment 80 Richards Street Brooklyn, NY 11231 Aaron & Wright Project No. M030354DD.ERK Emily Rose King

Dear Mr. Ades:

Aaron & Wright Technical Services Incorporated (Aaron & Wright) has completed a Limited Site Assessment (LSA) of the above referenced property. The assessment was conducted in accordance with the scope of work outlined in Aaron & Wright's proposal dated November 11, 2003 and generally accepted industry standards.

Aaron & Wright certifies that to the best of its knowledge this report is true and accurate. We hope you find the report complete and informative. Please do not hesitate to contact us if you have any questions or if we can be of further service to you.

Sincerely,

AARON & WRIGHT TECHNICAL SERVICES INCORPORATED

Emily Rose King

Project Manager

John T. Burkart

Director of Environmental Services

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#### 1.0 EXECUTIVE SUMMARY

#### 1.1 Property Summary

Property Address:

80 Richards Street

City/County/State/Zip Code:

Brooklyn, NY 11231

#### 1.2 Background

Aaron & Wright was provided with information from a Phase I Environmental Site Assessment (ESA) prepared for the subject property by Middleton Environmental Incorporated (MEI). The date of the Phase I ESA was not provided. According to the Phase I ESA, the subject property is 1.84 acres in size and is developed with two industrial buildings. One of the buildings is approximately 146,650 square feet (SF) and is partially used as a furniture warehouse. The second building is 5,800 SF and is vacant. Both of the buildings contain basements. No further general property description was included in the MEI Phase I ESA.

MEI did not identify any recognized environmental conditions (RECs) at the subject property that warranted further investigation. However, the historic use of the subject property reportedly consisted of various industrial uses, including a machine works facility, a paper box factory, and an insecticide company. Aaron & Wright conducted this LSA to address the historic uses of the subject property.

#### 1.3 Field Activities and Findings

A total of five soil borings were advanced at the subject property and a total of seven soils samples (B-1, B-2, B-2/D, B-3, B-4, B-5, and B-5/D) were collected and analyzed for volatile organic compounds (VOC), indicative of both chlorinated and petroleum-based solvents, base neutral compounds (B/N), the list of 8 RCRA metals, pesticides, and polychlorinated biphenyls (PCBs) in accordance with the approved NYSDEC analytical methods. Please see Section 4.1 for a discussion regarding soil sample locations and details regarding field activities. Please see Appendix 1 for a site diagram, which indicated the locations of the soil borings, B-1 through B-5.

Soil sample analysis did not indicate the presence of VOC compounds, pesticides, or PCBs in the five boring areas sampled. However, detectable contaminants above the specific laboratory MDLs were identified in the B/N and metal analyses. Any exceedences of the NYSDEC Eastern USA Background Levels for metals, and the NYSDEC Soil Cleanup Objectives to Protect Groundwater Quality for B/N are highlighted in bold in Tables 1 and 2 in Section 4.2.

#### 1.4 Conclusions and Recommendations

It is Aaron & Wright's professional opinion that the historic operations have impacted the shallow soils of the subject property. It is Aaron & Wright's understanding of the current New York State regulatory requirements (6NYCRR Part 595) that the results of this investigation do not constitute a reportable release. However, in order to obtain a No Further Action status for the contaminants detected, Aaron & Wright deems it prudent for the subject property to enter into a Order of Consent/ Brownfield Cleanup Program with the NYSDEC based on the analytical results in this LSA.

#### 2.0 PURPOSE, SCOPE AND LIMITATIONS

#### 2.1 Purpose

Aaron & Wright was retained to conduct the LSA to determine whether or not the historic usage of the subject property as an industrial property, namely a machine works facility, a paper box factory, and an insecticide company, has resulted in a significant impact to the subsurface soils and/or groundwater at the subject property.

#### 2.2 Scope of Work

Aaron & Wright Technical Services Incorporated (Aaron & Wright) has completed a Limited Site Assessment (LSA) of the above referenced property. The assessment was conducted in accordance with the scope of work outlined in Aaron & Wright's proposal dated November 11, 2003 and generally accepted industry standards.

The specific scope of work included the following:

- The installation of five soil borings to a depth of 15 feet below ground surface (bgs) using a Geoprobe truck mounted core-sampling device,
- Collection of seven soil samples,
- Field screening for indications of potential impact using visual, olfactory, and instrumental techniques such as a photo-ionization detector (PID),
- Laboratory analysis of the collected soil samples.

Aaron & Wright notes that due to the high silt content and minimal recovery of the groundwater encountered in the temporary test wells installed on-site, groundwater samples were unable to be collected during the LSA.

#### 2.3 Limitations

The investigation has been performed in a professional manner using the degree of care and skill ordinarily exercised by and consistent with the standards of competent consultants practicing in the same or a similar locality as the Project. The reported observations and conclusions are limited only by the reported assumptions and limiting conditions and represent our unbiased and professional analysis, opinions, and conclusions. No other warranty, expressed or implied, is made or intended.

Aaron & Wright, its officers, and its employees have no present or contemplated interest in the property. Our employment and compensation for preparing this report are not contingent upon our observations or conclusions.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. This study is designed to reduce but not eliminate uncertainty regarding the existence of such conditions in a manner that recognizes reasonable limits of time and cost.

#### 2.4 <u>User Reliance</u>

The investigation was conducted on behalf of and for the exclusive use of IDEA Nueva, Inc. (Client) and HSBC Bank USA, solely for use in an environmental evaluation of the subject property. This report and findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party, in whole or in part without prior written consent of Aaron & Wright. However, Aaron & Wright acknowledges and agrees that the report may be conveyed to and relied upon by Client, HSBC Bank USA, and the title insurer associated with the refinancing and/or property transfer of the subject property.

#### 3.0 ENVIRONMENTAL SETTING

#### 3.1 Property Location

The subject property is bordered to the northeast by Delevan Street, to the northwest by a bus storage facility and several mixed use buildings, to the southeast by Richards Street, to the southwest by Verona Street. Please see Appendix 1, which includes a site diagram and site location map of the subject property.

#### 3.2 Topography

Property Elevation: Approximately 10 feet above mean sea level

Topography: The subject property is generally flat with a slight slope to the west.

Source: USGS Topographic Map; Jersey City, NJ - NY Quadrangle

USGS Topographic Map: A copy of the topographic map is included in Appendix 1.

Property Drainage: Surface runoff into storm drains located on Richards Street, Verona

Street, and Delevan Street.

#### 3.3 Surface Water Bodies

On-Site Water Bodies: There are no on-site water bodies.

Nearest Surface Water Body: The Buttermilk Channel is located approximately 0.45 mile to the west

of the subject property.

Flood Plain Designation: The subject property is located in Flood Zone B, which is defined as

areas inundated by the 100-year floodplain.

Source: Flood Insurance Rate Map (FIRM) Community Panel No.

360497 0062B

Flood Plain Map: A copy of the flood plain map is included in Appendix 6.

Indications of Wetlands: Aaron & Wright did not observe any water bodies or vegetation

indicative of wetlands on the subject property. The subject property is covered with the building, concrete, and unpaved land. It is unlikely that portions of the subject property would be classified as wetlands.

#### 3.4 Geology and Hydrology

Soil Type: The subject property is located in the Hartland (Middle Ordivician to

Lower Cambrian Age) Formation according to the USGS Bedrock and

Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, NY and Bergen and Hudson Counties, NJ, published by the United States Department of Interior. The geologic units are classified as white quartz microline-muscovite granite (w/qmim/gr); gray biotite-muscovite quartz schist (g/bmq/s); gray sillimanite-plagioclase-muscovite schist (g/spm/s); and greenish-black amphibolite (gb/am). According to the map, the most abundant surficial material in Kings, Queens, and New York Counties is glacial till that consists of a mixture of clay, silt, sand, gravel, and boulders. The surficial soils at the subject property are classified as the Urban Land complex. The Urban Land complex indicates that more than 100 percent of the predominant native soil type has been disturbed and covered with an impervious layer consisting of buildings, sidewalks, streets and other structures.

Source: USGS Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, NY and Bergen and Hudson Counties, NJ

Estimated Depth to Groundwater:

Approximately 8 to 8.5 feet below ground level (bgl)

Anticipated Flow Direction:

West

Basis of Flow Direction:

USGS Topographic Map; Jersey City, NJ - NY Quadrangle, 7.5 minute

series

#### 3.5 Drinking Water Information

Source of Drinking Water:

Municipal Water - New York City Department of Environmental

Protection (NYCDEP)

Water Supply Information:

Aaron & Wright obtained information pertaining to the source and the regulatory compliance of the drinking water supplied to the subject property from the New York City Department of Environmental Protection website. The subject property receives its drinking water from the New York City water supply system. The source of the surface water consists of 19 reservoirs and three controlled lakes in a 1,972 square-mile watershed that extends 125 miles north and west of New York City. Approximately 90% of the water comes from the Catskill/Delaware System located in Delaware, Greene, Schoharie, Sullivan, and Ulster counties, west of the Hudson River. The Croton System, the city's original upstate supply, normally provides about 10% of the daily water from 12 reservoir basins in Putnam, Westchester, and Dutchess counties. About 1% of the city's water supply comes from New York City's Groundwater System, located in southeastern Queens that operates 13 groundwater wells. According to the NYCDEP and its 2002 Water Quality Report, the city tests its water before it enters the distribution system. The water supplied to the property reportedly meets federal and state drinking water standards, including those for lead and copper.

#### 4.0 FIELD INVESTIGATION

#### 4.1 Field Activities

During this investigation, five (5) soil borings were advanced at the subject property, labeled B-1 through B-5, respectively. The borings were installed by Advanced Cleanup Technology (ACT) on December 5, 2003 using a Geoprobe direct push sampling probe.

Borings B-1 through B-5 were advanced to a maximum depth of 15 feet below surface grade. Boring B-1 was advanced on the northeastern exterior of Building B, 10 feet to the northeast of Building B, and 50 feet northwest of Building A. Groundwater was encountered in the boring at approximately 8.5 feet bgl. This location was a former potential drum storage area on-site. Boring B-2 was advanced adjacent to the on-site dumpster, located 18 feet to the northeast of Building B, and 13.5 feet northwest of Building A. Groundwater was encountered in the boring at approximately 8.5 feet bgl. This location was also a former potential drum storage area on-site. Boring B-3 was advanced on the northern portion of the site, 10 feet to the south of the sidewalk bordering the subject property on Delevan Street and 65 feet from the northern most corner of the site. Groundwater was encountered in the boring at approximately 8.5 feet bgl. This is the location of the front portion of the former on-site insecticide manufacturing company. Boring B-4 was advanced on the north central of the subject property, 15 feet northeast of Building B and 70 feet from the northern most corner of the site. Groundwater was encountered in the boring at approximately 8.5 feet bgl. This is the location of the rear area of the former on-site insecticide manufacturing company. Boring B-5 was advanced on the southeastern portion of the site, 6 feet to the northwest of Building A and 15 feet to the south of the sidewalk bordering the subject property on Delevan Street. Groundwater was encountered in the boring at approximately 8.0 feet bgl. This location is a parking area and an apparent up-gradient portion of the site.

At borings B-1 through B-5, soil samples were collected with a split-spoon sampling device with disposable plastic liners in five-foot increments. The samples were continually field screened with a PID to identify volatile organic vapors (VOV). No visual or olfactory evidence of contamination was identified, however, evidence of VOV was detected with the PID at borings B-2 and B-5. At boring B-2, a PID reading of 6.0 was detected within the 1 to 2 foot interval, a PID reading of 79.8 was detected in the 2 to 3 foot interval, and PID reading of 17.2 was detected in the 3 to 4 foot interval. Therefore, Aaron & Wright collected a soil sample from the 2.5 to 3.0 foot interval for analysis, labeled B-2 for consistency. At boring B-5, a PID reading of 24.3 was detected in the 2 to 3 foot interval, therefore Aaron & Wright collected a soil sample from the 2.5 to 3 foot interval for analysis, labeled B-5. In addition, Aaron & Wright observed ACT construct temporary wells at borings B-2 and B-5 upon completing the soil boring to 15 feet bgl. The temporary wells were constructed of 1.5 inch stainless steel construction with ten feet of 0.02 millimeter slotted screening. Aaron & Wright attempted to collect groundwater samples via disposable 0.25 inch ID polyethylene tubing with a bottom-mounted check valve, which was lowered into the temporary wells and into the groundwater table. However, due to the high silt content and minimal recovery of the groundwater encountered in the temporary test wells installed on-site, groundwater samples were unable to be collected during the LSA. Therefore, Aaron & Wright collected one additional soil sample from borings B-2 and B-5 at the groundwater interface for analysis. Soil sample B-2/D was collected at the 8 to 8.5 foot interval at boring B-2, and soil sample B-5/D was collected at the 7.5 to 8 foot interval at boring B-5.

Since no PID readings were detected in borings B1, B-3, and B-4, and the recognized environmental concern (REC) at these borings involved the potential for surficial spills, soil samples were collected from the 1.5 to 2 foot interval for analysis from these three borings and were labeled B-1, B-2, and B-3, respectively.

Cuttings from the soil borings were placed back in the boring holes in accordance with USEPA, guidelines for investigative derived waste. The two borings (B-2 and B-5) which were advanced in asphalt paved areas were backfilled with the cuttings and the upper two feet was sealed with concrete. Please see Appendix 1 for a site diagram, which indicated the locations of the soil borings, B-1 through B-5. The soil boring logs can be found in Appendix 2.

These soil samples were transferred into laboratory supplied glassware, placed in the chilled cooler, and submitted to Integrated Analytical Laboratories, Inc. (IAL) for the specified analyses in accordance with the approved NYSDEC methods.

#### 4.2 Laboratory Analyses

The seven soils samples (B-1, B-2, B-2/D, B-3, B-4, B-5, and B-5/D) were each analyzed for volatile organic compounds (VOC), indicative of both chlorinated and petroleum-based solvents, base neutral compounds (B/N), the list of 8 RCRA metals, pesticides, and polychlorinated biphenyls (PCBs) in accordance with the approved NYSDEC analytical methods.

Soil sample analysis did not indicate the presence of VOC compounds, pesticides, or PCBs in the five boring areas sampled. The laboratory data indicated VOC compounds, pesticides, and PBBs were noted below method detection levels. However, detectable contaminants above the specific laboratory MDLs were identified in the B/N and metal analyses and are summarized below. Any exceedences of the NYSDEC Eastern USA Background Levels for metals, and Soil Cleanup Objectives to Protect Groundwater (GW) Quality for B/N are highlighted in bold in Tables 1 and 2. The analytical results can be found in Appendix 3.

TABLE 1: SOIL ANALYTICAL RESULTS FOR METALS (ppm\*)

ANALYTES	<b>B-1</b> mg/kg 1.5' - 2'	<b>B-2</b> mg/kg 2.5' - 3'	<b>B-2/D</b> mg/kg 8' - 8.5'	<b>B-3</b> mg/kg 1.5' - 2'	<b>B-4</b> mg/kg 1.5' - 2'	<b>B-5</b> mg/kg 2.5' - 3'	<b>B-5/D</b> mg/kg 7.5' - 8'	NYSDEC EASTERN USA BACKGROUND LEVEL mg/kg
Arsenic	4.12	7.9	154	7.24	26.5	7.95	2.64	3 - 12
Barium	240	22.7	98.3	288	313	77.6	66.6	15 - 600
Cadmium	0.675	ND**	ND	2.02	1.22	10.4	ND	0.1 - 1
Chromium	19.7	14.8	10.4	14.9	41.8	25.8	25.1	1.5 - 40
Lead	220	28	253	346	3,210	250	68.6	200 - 500
Mercury	0.34	0.055	0.097	6.38	17	0.641	0.252	0.001 - 0.2
Selenium	ND	ND	8.83	ND	ND	ND	ND	0.1 - 3.9
Silver	ND	ND	ND	ND	1.51	ND	ND	N/A

<sup>\*</sup> Parts per million (mg/kg)

<sup>\*\*</sup> None detected above the applicable laboratory method detection limits (MDLs).

TABLE 2: SOIL ANALYTICAL RESULTS FOR B/N (ppm\*)

ANALYTES	<b>B-1</b> mg/kg 1.5' - 2'	<b>B-3</b> mg/kg 1.5' - 2'	<b>B-4</b> mg/kg 1.5' - 2'	<b>B-5</b> mg/kg 2.5' - 3'	<b>B-5/D</b> mg/kg 7.5 - 8'	NYSDEC SOIL CLEANUP OBJECTIVES TO PROTECT GW QUALITY (mg/kg)
Naphthalene	0.897	0.318	ND**	ND	ND	13
2-Methylnaphthalene	0.643	0.127	ND	ND	ND	36.4
Acenaphthylene	1.24	ND	ND	ND	ND	41
Acenaphthene	1.36	0.119	ND	ND	ND	90_
Dibenzofuran	1.49	0.206	ND	ND	ND	6.2
Flourene	2.03	0.076	ND	ND	ND	350
Phenanthrene	21.1	2.34	0.528	0.588	0.131	220
Anthracene	3.88	0.265	0.073	0.127	ND	700
Carbazole	1.27	0.157	ND	ND	ND	Not listed
Fluoranthene	21.4	2.20	0.786	0.844	0.228	1,900
Pyrene	13.7	1.76	0.669	0.728	0.212	665
Benzo(a)anthracene	8.17	1.01	0.374	0.409	0.132	3.0
Chrysene	7.60	1.05	0.387	0.393	0.124	0.4
Benzo(b)fluoranthene	5.63	0.896	0.351	0.388	0.104	1.1
Benzo(k)fluoranthene	7.16	0.720	0.303	0.269	0.109	1.1
Benzo(a)pyrene	8.35	0.964	0.433	0.464	0.147	11
Indeno(1,2,3-cd) pyrene	3.25	0.549	0.239	0.256	0.076	3.2
Dibenz(a,h)anthracene	1.24	0.232	0.091	0.093	ND	165,000
Benzo(g,h,i)perylene	3.41	0.596	0.252	0.305	0.096	800

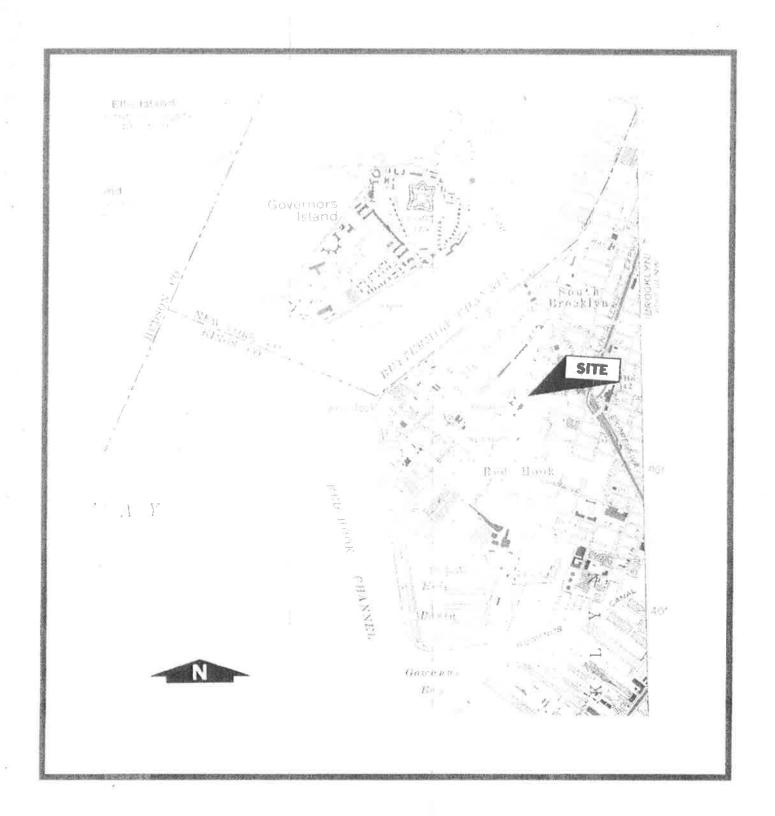
<sup>\*</sup> Parts per million (mg/kg)

#### 4.3 Findings and Recommendations

It is Aaron & Wright's professional opinion that the historic operations have impacted the shallow soils of the subject property. It is Aaron & Wright's understanding of the current New York State regulatory requirements (6NYCRR Part 595) that the results of this investigation do not constitute a reportable release. However, in order to obtain a No Further Action status, Aaron & Wright deems it prudent for the subject property to enter into a Order of Consent/ Brownfield Cleanup Program with the NYSDEC based on the analytical results that identified soil contaminants above NYSDEC Soil Cleanup Objectives in this LSA.

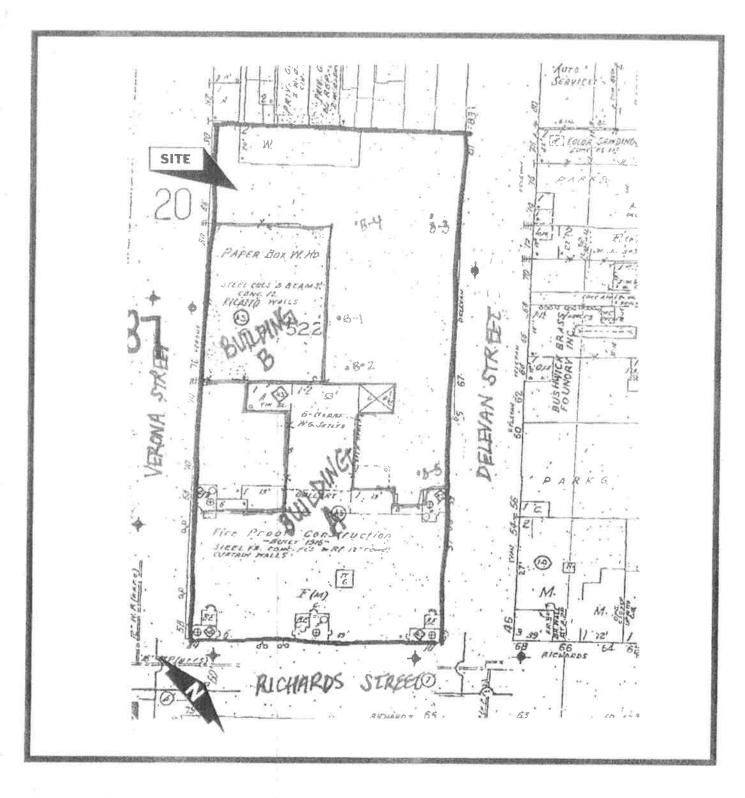
<sup>\*\*</sup> None detected above the applicable laboratory method detection limits (MDLs).

# APPENDIX 1 LOCATION AND SITE MAPS



80 Richards Street Brooklyn, Kings County, NY

A&W Project No. M030354DD.ERK



80 Richards Street Brooklyn, Kings County, NY

# APPENDIX 2 BORING LOGS

SOIL SAMPLING BORING LOG: B-1									
Depth (feet)	Sample	DESCRIPTION							
1		Brown silt with gravel and voids							
2	X	SAA							
3		SAA							
4		SAA							
5		SAA with brick							
6		SAA							
7		SAA							
8		SAA							
9		SAA - wet							
10		SAA into light brown sandy silt -wet							
11		Light brown sandy silt-wet							
12		SAA							
13		SAA							
14		SAA							
15		SAA							
	_8								

SOIL SAMPLING BORING LOG: B-2								
Depth (feet)	Sample	DESCRIPTION						
1		Asphalt into brown sandy silt with gravel and voids						
2		Brown sandy silt with gravel and voids and brick						
3	X	Brown sandy silt with gravel and voids						
4		SAA						
5		SAA						
6		SAA						
7		SAA						
8	X	SAA						
9		SAA into dark brown silt with gravel - wet						
10		Dark brown silt with gravel - wet						
11		SAA						
12		SAA						
13		SAA						
14		SAA into grey clay - wet						
15		Grey clay - wet						

		SOIL SAMPLING BORING LOG: B-3
Depth (feet)	Sample	DESCRIPTION
1		Light brown silt with gravel and voids
2	X	SAA with brick
3		SAA
4		SAA
5		SAA
6		SAA into dark brown silt
7		Dark brown silt into light tan sand
8		Light tan sand into brown silt with gravel and brick
9		Brown silt with gravel and brick into red sandy silt -wet
10		Red sandy silt into light brown sand - wet
11		Light brown sand into light grey clay - wet
12		Light grey clay - wet
13		Light brown sand - wet
14		SAA
15		SAA
		· ·

80 Richards Street

SOIL SAMPLING BORING LOG: B-4  Depth (feet)   Sample   DESCRIPTION								
Depth (feet)	Sample	DESCRIPTION						
1		Brown sandy silt with gravel and voids						
2	X	SAA with brick and woodchips						
3		Brown sandy silt with gravel, brick, and wood						
4		SAA						
5		SAA						
6		SAA						
7		SAA						
8		SAA into brown sandy silt						
9		SAA - wet						
10		SAA						
11		SAA						
12		SAA						
13		SAA						
14		SAA						
15		SAA						

		SOIL SAMPLING BORING LOG: B-5
Depth (feet)	Sample	DESCRIPTION
1		Asphalt into brown sandy silt with gravel and voids
2		Brown sandy silt with gravel and voids
3	X	SAA
4		SAA
5		SAA
6		SAA
7		SAA into dark brown silt
8	X	Dark brown silt into light brown silt - wet
9		Light brown silt - wet
10		SAA
11		SAA
12		SAA
13		SAA
14		SAA
15		SAA
		(90)

80 Richards Street

# APPENDIX 3 ANALYTICAL RESULTS

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# Client: Aaron & Wright Technical Service, Inc. Project: M030354DD.ERK Lab Case No.: E03-10988

Lab Case No.: E03-10988											
Lab II		988-001	10	988-002	109	988-003	10	988-004			
Client II		B-I		B-2		B-3	B-4				
Matri				Soil		Soil	Soil				
Sampled Da		/5/2003	1.2	/5/2003	12/	5/2003	12	/5/2003			
PARAMETER(Units)	Cone	Q MDL	Conc	Q MDL	Conc	Q MDL	Conc	Q_MD			
Volatiles - Special I ist (mg/Kg-ppm)											
Vinyl Chloride	ND	0.00565:	ND	0.00555	MD	0.0063	ND	E, (R)			
Chloroethane	ND	0.00565	ND	0.00555	ND	0.0063	ND	11111			
1.1-Dickloroethene	ND	0.00565	ND	0.00555	ND	0,0063	ND	O OOK			
Acetone	ND	0.011	ND	0.011	ND	0.013	ND	0 01			
Ombon Disulfide	ND	0.00565	ND	0.00555	ND	0,0063	ND	0 00			
Methylene Chloride	ND	0.00565	ND	0.00555		0.0063	ND				
rans-1,2-Dichleroethene	CIM	0.00565	ND	0.00555	ND	0.0063	ND	0.00			
Methyl-t-Butyl Ether MTBE)	ND	0.00565	ND	0.00555	ND	0.0063	ND	(1 ()()			
1.1-Dichloroethane	ND	0.00565	ND	0.00555	ND	0.0063	ND	yean			
1-Butanoue(MEK)		0.011	ND	0.00333	ND	0.013	ND	H (A)			
	ND	0.00565	ND	0.00555	ND			(11)			
1 - Tikh wethme	ND	0.00565	ND	0.00555		0.0063	ND	() (HW			
arism Terrachicude	- ND	0.00565	ND	0.00555			ND	ti trid			
2 Dichloroethanet EDC)	NU	0.00565	ND	0.00555	ND	0.0063	CIM	111)(11			
Bonzene	ND	0.00565	ND	0.00555	ND	0.0063	NI	OUR			
i neinforcettiene	ND	0.00565	ND		ND	0.0063	ND	O tak			
i-Methyl-2-pentanone(MIBK)	ND	0.011	ND	0.00555	ND	0.0063	ND	HÚH			
l'aluene	ND	The state of the s		0.011	ND	0.013	ND	0.01			
i cuachtoroutiene	ND	0.00565	ND	0.00555	ND	0.0063	ND	HELM			
3-Dichloropropane		0 00565	ND	0.00555	ND)	0 (2063	ND	.0.000			
Dibromochloromethane	MD	0.00565	ND	0.00555	ND	0.0063	ND	0.000			
zarromochoromennane Phiorobenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0 Our			
	m ND	0.00565	ND	0.00555	ND	0 0063	ND	0.006			
ithylbenzene	ND	0.00565	ND	0.00555		0.0063	ND	0, OKK			
lotal Xylenes	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
sopropylbenzene	ND	0.00565	ND	0.00555	ND	0.0063 ;	ND	0.006			
,1.2.2-Tetrachloroethane	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
.2.3-Trichloropropane	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
- Propylbenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
3,5-Trunethylbenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
ert-Butylbenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
.2,4-Trunethylbenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
ec-Butylbenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
.3-Dichlorobenzene	MD	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
l-isopropyitoluene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
.4-Dichlorobenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
-Butylbenzene	ND	0.00565	ND	0.00555	MD	0.0063	ND	0.006			
2-Dichlorobenzene	ND	0.00565	ND	0.00555	ND	0.0063	ND	0.006			
2.4-Trichlorobenzene	ND	0.00865	ND	0.00555	ND	0.0063	ND	0.006			
Caphthalene	ND	0.00565	ND	0.00555	NID	0.0063	ND	0.006			
1.2-Trichloro-1,2.2-Influeroethane	ND	0,00565	ND	0.00555	ND	0.0063	ND	0.006			
VISA) VAS	J. Since		V HIST	1		i i					
OTAL VO's:  D = Analyzed for but Not Detected at 1	: ND		ND	A	ND		ND				

## Client: Aaron & Wright Technical Service, Inc.

Project: M030354DD.ERK Lab Case No.: E03-10988

	Lab ID:	Lab Case No.: E03-10988 10988-001 10988-002				100	00.002	10988-004		
	Client ID:		3-1	.005	B-2		88-003	10		
	Matrix.	Soil			Soil.		B-3	B-4		
	Sampled Date		5/2003		5/2003		Soil 5/2003	1.2	Soil	
PARAMETER(Units)	manyara Dare				Q MDL		Q MDL		/5/2003	
		T of			VS WILLY	COM	Q MILE	L.Onc	Q MDL	
Semivolatiles - BN (mg/	Kg-ppm)									
Naphthalene		0.897	0.212	1.10	0.103	0.318	(1)24	ND	0.112	
2-Methylmaphthalene		0.643	0.212	211)	0.103	0127	0.124	ND	0.112	
Acenaphthylene		1.24	0.212	- NID	0.103	NEO	0.124	ND	0.112	
Acenaphilhene		1.36	0.212	ND	0,103	0.119		ND	0.112	
Dibenzofuran		1.49	0.212	×11)	0103	0.206	0.124	NID	0.113	
Fluorene		2.03	0.212	ND	0.103	0.076		ND	0112	
Phenantirene		21	0.212	NB	0.103	2 34	0.124	0.528	0.112	
Anthracene		3.88	0.212	ND	0.103	0.265	0.124	0,013		
Carbazole		1.27	0.212	1.10	0.103	U15?	0.124	ND	(1)12	
Fluoranthene		21.4	11212	ND:	0.103	2 20	0.124	0.786	0.112	
Pyrene		137	0212	130	0:103	1.76	0.124	0.669	0.112	
Benzo a anthracene		817	(42)2	1015	0.103	1.01	0.124	0.374	1112	
Chrysene 2		7.60	0.212	133	0.103	1.05	0.124	0.381	1112	
Benzo[b]fluoranthene		5.63	0.212	N()	0103	0.896	0 124	0.351	0112	
Benzofkifluoranthenes		746	0.212	5715		0.720	0124	0.303		
Benzo[a]pyrene		8.35	0.212	NE	0:103	0.964	0.124	0.433	0112	
Indeno[1,2,3-cd]pyrene		8.25	0.212	ND		0.549	0.124	0.239	0.112	
Dibenz[a,h]anthracene		1 24	0.213	ND	0.103	0.232	0.124	0.091	1 0112	
Benzo[g.h.i]perylene		3.41	0.212	ND	0.103	0.596	0.124	0.057	0.112	
TOTAL BN'S:		( a								
		114		ND		13.6	1	1-19		
PCB's (mg/Kg-ppm)		ND	0.0]7	NI)	0.015	ND	0.018	ND	4.01?	
Pesticides (mg/Kg-ppm)		ND	0.00425	ND	0.0038	ND	0.00441	ND	0.0043)	
Metals (mg/Kg-ppm)										
Arsenic		4.12	1.13	7.90	1.10	7.24	1.25	26.5	1 22	
Barium	1	240	11.3	23.7	110	288	12.5	313	3 3 2	
Cadmium	į.	0.675	0.281	ND	0.274	2.02		1.22	0.306	
Chromium)		19.7	2.25	14.8	2.19	14.9	2.51	41.8	2.45	
bead :	8	220	0.563	28.0	0.548	346	0.627	3210	0.612	
Mercury		0.340	0.014	0.055	0.014	6:38	0.780	420	1.50	
Selenium	20	ND	2.25	ND	2.19	ND	2.51	ND	2.45	
Silver	1	ND	0.563	ND	0.548	ND	0.627		0.612	

ND = Analyzed for but Not Detected at the MDL

J= The concentration was detected at a value below the MDL.

All qualifiers on individual Semivolatiles are carried down through summation.

## Client: Aaron & Wright Technical Service, Inc. Project: M030354DD.ERK

Lab Case No.: E03-10988

Lab Case No.: E03-10988 Lab ID: 10988-005 10988-006 10988-007											
Client ID:		B-5		B-21		B-5D					
Matrix:		Soil		Soi							
Sampled Date		12	/5/2		Soil 12/5/2003						
PARAMETER(Units)		5/2003 Q MDL			MDL			MDL			
Volatiles Special List (mg/Kg-ppm)	-										
l'in Chanle	MÐ	0.00615	ND	(	0.00755	ND		0.0061			
Microethane	ND	0.00615			0.00755			0.0062			
1.1-Dichloroethene	ND	0.00615			.00755			0.006			
Acerone	ND	0.012	ND		0.015	ND		0.012			
Carbon Disulfide	ND	0.00615			1.00755:			0.0060			
Methylene Chloride	ND	0.00615			0.00755	ND		0.0062			
nanci 2 Dichloroethene	ND	0 00615			1.00755			0.0061			
Methyl-t-Buryl Ether(MTBE)	ND	0.00615			1.00755	ND		0.000.			
1.1-Dichloroethane	ND	0.00615	ND		HR)755	ND		0.0061			
2-Buranoned/IEK;	ND	0.0013	ND		0.015	ND		00012			
nisotern	ND	0.00615	ND		00755	ND		0.0061			
Li-l-Trichloroethane	ND	0.00615	ND		1.00755	ND					
Carleso Fetrachloride	ND	0.00615	ND		1.00755	ND		0.0061			
1.2-Dichtoroethane(EDC)	ND	0.00615	ND		.00755	ND		0.006. 0.006.			
Serverie	ND	0.00615			(.00755)			0.006			
The state of the s	ND	0.00615	ND		.00755	ND		0.006			
4- Methyl-2-pentanone(ML3K)	ND	0.012	ND		0.015			0.012			
Tohiene	ND	0.00615:			.00755	ND					
letrachleroethene	ND	0.00015			1			0.00 <b>6</b> 2			
L3-Dichkaropropane	ND	0.00615	ND		00755	ND		6 0061			
Dibromochloromethane	ND	0.00015			.00755	ND		0 0061			
Thiorobenzene	ND	0.00615	ND ND		.00755	ND		0.0062			
Etingtheorene	ND		ND		.00755	ND		0.0060			
Total Astenes	ND	0.00615:	ND		.00755	ND		0.0063			
Isopropylbenzene	ND	0.00615	ND		00755	ND		0.0062			
1.1.2 2-Tetrachloroethane	ND	0.00615	ND		.00755	ND		0.00 <b>62</b> 0.70723			
1,2.3-Trichloropropane	ND	0.00615	ND			ND		0.0062			
n-Propylbenzene	ND				.00755			0.0062			
1,3,5-Trimethylbenzene		0.00615	ND		.00755	ND		0.0062			
	ND	0.00615	ND		00755	ND		0.0062			
en-Bulylbenzene	ND	0.00615	ND		.00755	ND		0.0062			
1,2,4-Trimethylbenzene	ND	0.00615	ND		.00755	ND		0.0062			
sec-Butylhenzene	ND	0.00615	ND	14	.00755	ND		0.0062			
1.3-Dichlorobenzene	ND	0.00615	ND		.00755	ND		0.0062			
i-Isopropyltoluene	ND	0.00615	ND	- 1	.00755	ND		0.0062			
A-Dichlorobenzene	ND	0.00615	ND		00755	ND		0.0062			
n-Butylbenzene	ND	0 00615	ND		:00755	ND		0.0062			
2-Dichlorobenzene	ND	0.00615	ND		00755	ND		0.0062			
,2,4-Trichlorobenzene	ND	0.00615	ND		.00755	ND		0.0062			
Vaphulaione	ND	0.00615	ND		.00755	ND		0.0062			
1.1.2-Trichloro-1.2.2-trifluoroethane	ND	0.00615	ND	-0	00755	ND		0.0062			
TOTAL VO's:	ND		ND	1		ND					

ND Analyzed for but Not Detected at the MDL

Client: Aaron & Wright Technical Service, Inc.

Project: M030354DD.ERK Lab Case No.: E03-10988

Lab ID: Client ID: Matrix: Sampled Date	B-5 Soil		10988-006 B-2D Soil 12/5/2003		10988-007 B-5D Soil 12/5/2003	
PARAMETER(Units)		MDL	4			Q MDL
Semivolatiles - BN (mg/kg-ppm)					la .	
Phenanthrone	0.588	0.114	ND	0.150	0.3	0:115
Anthracene	0120	0.114	ND	0.150	ND	0.115
Fluoranthene	0.844	0.114	ND	0.150		0.115
Pyrene	0.728	0.114	ND	0.150	0.212	0.115
Benzol a lanthracene	0.409	0.114	ND	0.150	0.132	0.115
Chrysene	0.393	0.114	ND	0.150	0.124	0.115
Benzo[b]fluoranthene	0.388	0.114	ND	0.150	0104	J 0.115
Benzo[k]fluoranthene	0.269	0.114	ND	0.150		J 0.115
Benzo[a]pyrene	11 464	0114	ND	0.150	0.147	0.115
Indeno[1,2.3-cd]pyrene	14 256	0.114	ND	0.150		J 0.115
Dibenzia, hijanthiacene	0.693 1		ND	0.150	ND	0.115
Benzolg,h.ilperylene	10 305	0.114	ND	0.150	0.096	J 0.115
TOTAL BN'S:	4.86 J	v.	ND		1.36	Ensys
PCB's (mg/Kg-ppm)	ND	0.017	ND	0.021	ND	0.017
Pesticides (mg/Kg-ppm)	ND	0.00418:	ND	0.00513	ND	0.00419
Metals (mg/Kg-ppm)						
Arsenic	7.95	1.23	154	1.52	2.64	1.24
Barium	12.6	12.3	98.3	15.2		12.4
Gadmum	10.4	0.306	ND	0.381		0.309
Chromiusp	25.8	2.45	10.4	3.04	25.1	2.47
Lead	250	0.613	253	0.761	68.6	0.618
Mercury	0.641	0.015	0.097	6,019	0.252	0.015
Seleniup	ND	2.45	8.83	3.04	ND	2.47
Silvér	ND	0.613	ND	0.761	ND	0.618

ND = Analyzed for but Not Detected at the MDL

J = The concentration was detected at a value below the MDL.

All qualifiers on individual Semivolatiles are carried down through summation.